REMARKS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1 and 5-14 are presently pending in this application.

In the outstanding Office Action, Claims 1 and 5-14 were rejected under 35 U.S.C. §112, first paragraph, for containing subject matter not described to reasonably convey that the inventors had its possession; Claims 1 and 5-14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Francis (U.S. Patent 2,543,101) in view of O'Conner (U.S. Patent 4,800,113), and alternatively further in view of PCT WO 90/14457 (hereinafter "WO '457"); and Claims 1 and 5-14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Francis in view of O'Conner, WO '457, Tailor et al. (U.S. Patent 5,529,826), Vane (U.S. Patent 5,445,693) and EP 466,618 (hereinafter "EP '618").

First, Applicants acknowledge with appreciation the courtesy of the personal interview granted to Applicants' attorney on May 15, 2003. During the interview, the outstanding issues regarding the rejection under 35 U.S.C. §112, first paragraph, as well as the patentability of the pending claims were discussed in light of Applicants disclosure. As a result of the discussions, in response to the rejection under 35 U.S.C. §112, first paragraph, the Examiner suggested Applicants to submit a declaration under 37 C.F.R. §1.132 pointing out any mistranslations in the English translation of the French specification for the international application filed under 35 U.S.C. §363 along with a Petition under 37 C.F.R. §1.182 requesting consideration of the mistranslations. Accordingly, submitted herewith are a declaration under 37 C.F.R. §1.132 pointing out the mistranslations in the English translation of the French specification filed under 35 U.S.C. §363 pertaining to the amendments in the response previously filed August 15, 2002, and a Petition under 37 C.F.R.

§1.182 for the request for consideration of the mistranslations and support for those previously submitted amendments.

Briefly, Claim 1 according to the present application is directed to a method for continuously manufacturing a composite product including preparing intimately blended commingled threads containing glass filaments and filaments of thermoplastic organic material, providing a strip of fabric made from the intimately blended commingled threads and a plurality of continuous threads including at least 80% by weight of the intimately blended commingled threads, continuously depositing onto a moving conveyor two layers, one of the two layers including the plurality of continuous threads in a form of at least one of continuous threads continuously deposited in a direction of movement of the moving conveyor, continuous threads continuously deposited in a form of superposed loops and continuous threads continuously deposited in a form of chopped threads, and the other one of the two layers including the strip of fabric, continuously transferring the two layers combined through a plurality of zones where the two layers are heated and cooled while being sufficiently compressed to form a continuous rigid void-free composite material capable of being molded, and at least one of cutting up the rigid void-free continuous composite material into a plurality of sheets and sufficiently softening the continuous rigid void-free composite material to wind onto a rotating drum. According to Claim 1, the glass filaments deposited in the process in total comprise more than 40 % by weight of the glass filaments and the filaments of thermoplastic organic material deposited in the process.

By continuously depositing the two layers containing glass threads and thermoplastic organic material and transferring the two layers as such, not only a rigid void-free composite material whose content of reinforce fibers is exceedingly high can be continuously

manufactured,[1] but also a high content of reinforcing fibers can be readily promoted evenly throughout the rigid void-free composite product. As a result, rigid void-free continuous composite products manufactured have strength which is equal or higher than those manufactured simply by increasing glass content.[2]

Francis discloses a method for manufacturing a composite product having a layer of prefabricated textile material and a layer of felt-like material,[3] and fails to teach the continuously depositing and transferring steps, wherein the glass filaments deposited in the process in total comprise more than 40 % by weight of the glass filaments and the filaments of thermoplastic organic material deposited in the process as recited in Claim 1. The Francis felt-like product is a composite formed from at least one felt-like bat or web, having a potentially adhesive fibers and non-adhesive fibers, and a supporting or reinforcing textile fabric to which the body of the bat or web is bonded or anchored, so as to leave at least one exposed surface exhibiting felt-like characteristics.[4] As pointed out previously, the Francis felt-like product is obtained from a pre-formed bat made of fabric and either a liquid adhesive material or a fibrous layer comprising potentially adhesive fibers or such fibers admixed with non- adhesive fibers, and the whole is subjected to heat and pressure to effect a firm binding of the fibers in the bat and to secure the permanent adhesion and anchoring to the bat of the fabric.[5] However, when applying a substantial compacting pressure to reduce the product so that it has the thickness and the density desired, the final product thus obtained in Francis still has its felt-like structure. Otherwise, the final product cannot be used for the applications disclosed in Francis, i.e., a flat felt per se, or molded or shaped over three dimensional objects having rounded or squared contours or other configuration departing from a simple single-

[1] Specification, Page 15, lines 7-11
[2] Id. Lines 28-38
[3] Francis, column 1, lines 1-7
[4] Id., column 2, lines 17-23.
[5] Id., column 7, lines 4-17.

plane flat surface without bursting or tearing, more specifically, fillers for upholstery, acoustic aids, heat insulators, shock absorbers, carpet linings and shoe stiffeners which require to have the continuity of the interfelted structure maintained.[6] Thus, the structure of the final composite product disclosed in Francis is very light weight, thick, felt-like structure characterized by a low density, high porosity and permeability, without sacrifice of firmness and tensile strength.[7] Furthermore, as seen from Figure 1 of the Francis product manufacturing process, the Francis process necessarily involves a zone just after the rollers 21, 22 in which the pre-formed bat is exposed to heated air blown by the blower 26 and the heated air is drawn downwardly through the product by the exhaust pump 27.[8] The product then passes from the heating zone into a confined cooling zone in which cool air is directed upon the product by the blower 30 and drawn downwardly therethough by the exhaust blower 32.[9] In the heating and cooling steps of the process disclosed in Francis, it is absolutely necessary to maintain a certain degree of porosity so as to permit air to pass through the composite and the belt 3, thus extracting the air by the exhaust blowers 27, 32. Applicants also wish to point out that Fig. 4 of Applicants' drawings shows the mechanical behavior of the composites according to the present invention, in particular, the flexural strength and the tensile strength (expressed in MPa) relatively to the glass content expressed either in weight % or in volume %. Notably, the products disclosed in Francis do not belong to the same category of composite materials because their mechanical properties cannot be assessed under the conditions of Fig. 4 in order to measure the flexural strength and the tensile

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[6] Id., column 11, lines 28-51.

[7] Id., column 11, lines 52-56.

[8] Id., column 9, lines 17-25.

[9] Id., lines 26-33.

strength. The felt-like structure disclosed in Francis, even if consolidated, is totally inconsistent with such measurements. As such, Francis does not disclose or suggest modifying the temperature and pressure in the activating zone and/or deactivating zone to such a high degree of compaction that a rigid, void-free product is obtained at the end, and even if the commingled filaments of thermoplastic and reinforcing filaments disclosed in O'Connor are employed, an expected product would be a felt-like product. Therefore, Applicants respectfully submit that the process disclosed in Claim 1 is distinguishable from Francis.

O'Connor also does not teach the continuously depositing and transferring steps, wherein the glass filaments deposited in the process in total comprise more than 40 % by weight of the glass filaments and the filaments of thermoplastic organic material deposited in the process. O'Connor, on the other hand, discloses "intermingling" filaments of thermoplastic and continuous filaments of reinforcing fibers, weaving these filaments into a fabric, and heating the fabric,[10] and therefore does not disclose providing a strip of fabric and a plurality of continuous threads as recited in Claim 1. O'Connor also fails to disclose continuously depositing two layers, one of the two layers including the plurality of continuous threads in a form of at least one of continuous threads continuously deposited in a direction of movement of the moving conveyor, continuous threads continuously deposited in a form of superposed loops and continuous threads continuously deposited in a form of chopped threads, and the other one of the two layers including the strip of fabric. Thus, O'Connor does not disclose the adequate contact between the strip of fabric and the layer made of at least one of the continuous threads disclosed by Applicants. Hence, the process recited in Claim 1 is believed to be clearly distinguishable from O'Connor.

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[10] O'Conner, columns 6-7

WO '457, Tailor et al., Vane and EP '618 all disclose methods for producing "composite material," but are not believed to teach the continuously depositing and transferring steps, wherein the glass filaments deposited in the process in total comprise more than 40 % by weight of the glass filaments and the filaments of thermoplastic organic material deposited in the process as discussed above. Thus, the process recited in Claim 1 is also believed to be distinguishable from WO '457, Tailor et al., Vane and EP '618.

Since none of Francis, O'Conner, WO '457, Tailor et al., Vane and EP '618 discloses the continuously depositing and transferring steps, wherein the glass filaments deposited in the process in total comprise more than 40 % by weight of the glass filaments and the filaments of thermoplastic organic material deposited in the process as recited in Claim 1, even the combined teachings of these cited references are not believed to render the process recited in Claim 1 obvious.

Because Claims 13 and 14 are believed to include subject matter substantially similar to what is recited in Claim 1 to the extent discussed above, Claims 13 and 14 are also believed to be distinguishable from Francis, O'Conner, WO '457, Tailor et al., Vane and EP '618.

For the foregoing reasons, Claims 1, 13 and 14 are believed to be allowable. Furthermore, because Claims 5-12 ultimately depend from Claim 1, substantially the same arguments set forth above also apply to these dependent claims. Hence, Claims 5-12 are believed to be allowable as well.

In view of the discussions presented above, it is respectfully submitted that the present application is in condition for allowance, and an early action favorable to that effect is earnestly solicited.

Respectfully submitted,

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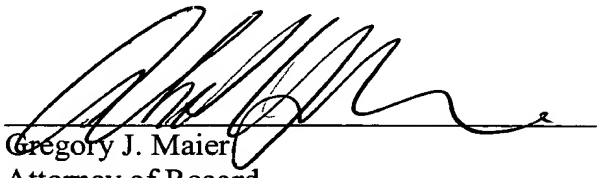

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